Regeln

You have 20 minutes to submit answers. There are 7 questions and a correct answer is always a positive real number i.e. question i has answer $\theta_i \in \mathbb{R}_+$ for $i = 1, 2, \ldots, 7$. Submissions are made in the form of an interval:

$$[\text{Min}_i, \text{Max}_i]$$

Note that both endpoints are included. Each team has 11 guesses hence multiple submissions for questions is possible altough the score, and hence the correctness of the guess, will always be based on the **latest** submission to the question. Submissions can be made throughout the quiz. The team's score is given by the formula:

$$\left(10 + \sum_{i:\text{Min}_i \leq \theta_i \leq \text{Max}_i} \left\lfloor \frac{\text{Max}_i}{\text{Min}_i} \right\rfloor \right) \cdot 2^{7 - \#\text{correct guesses}}$$

Where $\lfloor \cdot \rfloor$ is the floor function.

Hence, at the beginning of the quiz all teams have a score of

$(10 + 0) * 2^{7-0} = 1280$

When the time is up, the team with the **lowest** score wins.
When submitting an interval it must clearly state:

- Team
- Question
- Interval.

Using scientific notation is allowed but must follow the conventions of R e.g.:
100 = 1e2
93.000 = 93e3
1.010.000.000 = 101e7
etc.
After submission the team (and everybody else) will be able to see whether the guess is correct or not and if so the value of the answer in the sum i.e. $\lfloor \text{Max}_i / \text{Min}_i \rfloor$ as well as the updated total score.

emptypage

Fragen

1. The planet of Saturn has a bright and extensive system of rings, composed mainly of ice particles, with a smaller amount of rocky debris and dust. The rings extend from 6,630 to 120,700 kilometres outward from Saturn's equator. What is the average thickness in metres?

2. $Trump is a meme coin hosted on the Solana blockchain platform. 800 million coins remain owned by two Trump-owned companies, and 200 million were publicly released in an initial coin offering (ICO) on Jan 2025. What was the price in USD of one $Trump dec. 6th 2025 10am EST

3. Let $l(u)$ be the 1st coordinate of the intersection between the x-axis and the tangent linie in the point (u, e^u). Define,

$$l^{(n)} = l(l^{(n-1)}),$$

with $l^{(1)} = l(0)$, what is $-l^{(5)}$?

4. let

$$o(x,y) = \int_{\text{1st Jan. 1}}^{\text{6th Dec. 2025}} \mathbb{1}^x_{(u)} \mathbb{1}^y_{(u)} du$$

with unit of u being years. Further, let

$$z(I) = \sum_{i \neq j \in I} o(i,j)$$

what is

$$\lceil z(I) \rceil$$

for $I = \{\text{Adolf Hitler}, \text{Margrethe II}, \text{Salem al-Hazmi}, \text{X Æ A-Xii}\}$

5.
$$2026^2 - 2024^2$$

6. In 2019, there were almost 800 Danish mink farms. What was the average deficit of farms in 100.000s DKK?

7. Sum of Mens gold medal results i meters at the 2004s Summer Olympics: High jump, Pole vault, Discus throw, Hammer throw, Javelin throw.

Hint 1:

Recall the Beta integral

$$\int_0^1 t^{z_1-1}(1-t)^{z_2-1}dt = B(z_1, z_2)$$

B has the property

$$B(m,n) = \frac{\Gamma(m)\Gamma(n)}{\Gamma(m+n)}$$

Where Γ is the Gamma function, continous counterpart of the factorial, i.e. $\Gamma(n) = (n-1)!$

Hint 2:

The aircraft hijackers in the September 11 attacks were 19 men affiliated with al-Qaeda, a jihadist organization based in Afghanistan. Salem al-Hazmi was the youngest of the men and assisted in the hijacking of American Airlines Flight 77

Hint 3:

Live, Love, Laugh